

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Subsection (c) (9) to Section 671,
Title 14, California Code of Regulations
Re: New Zealand Mudsnail, Restricted Species

I. Date of Initial Statement of Reasons: April 6, 2004

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: May 4, 2004
Location: San Diego

(b) Adoption Hearing: Date: June 25, 2004
Location: Crescent City

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Current regulations restrict the importation, transportation, and possession of several animal species that could be detrimental to California ecosystems. The New Zealand mudsnail (NZMS), an invasive species that has the potential to significantly alter the aquatic ecosystem in many California streams, is not currently on the restricted species list in Section 671, Title 14, California Code of Regulations. Authority is currently lacking for the Department to restrict the possession, transportation or importation of NZMS. The Department is proposing to add NZMS to the restricted species list in Section 671 to enhance regulatory authority for controlling its spread into and within the State.

The New Zealand mudsnail, *Potamopyrgus antipodarum* (Gray), was first discovered in the mid-Snake River, Idaho in the 1980's. It is now rapidly spreading throughout the western USA and has become established in rivers in seven western states and three national parks.

Despite their tiny size (1/4"), New Zealand mudsnails are capable of rapid population growth. Infestations have been reported to approach a density of 28,000 individuals per square foot, indicating the potential for mud snails to "cover the stream bottom," similar to impacts observed with the Zebra Mussel in the Midwestern U.S. Reports indicate the NZMS may impact invertebrate communities not only through physical displacement or crowding, but also through competitive interactions such as food availability. Eastern Sierra streams not only support world famous recreational fisheries, but they also contain an abundance of native

aquatic insects that form an important part of the aquatic food chain and watershed biodiversity. Reductions in the insect species diversity or abundance could diminish the availability of this critical food resource to fish and disrupt these dynamic aquatic ecosystems. NZMS are a poor substitute for the traditional food base, yielding as little as 2% of their nutritional value when eaten by trout. Fish are known to consume mud snails and, unfortunately, the snails are known to survive passage through the digestive tract of fish. Thus, the spread of the mudsnail may be assisted by stocking fish from a facility known to be infested with the snail.

Recent informational workshops indicate there are few effective treatments to completely eliminate NZMS. Each NZMS population consists of parthenogenic clones, that is, genetically identical egg-laden females. Consequently, attempts at crushing or physical removal of the snails may only exacerbate the problem by spreading eggs to new sites. Chemical treatment would not necessarily be selective for snails only and could eliminate remnant invertebrate populations.

Although various vectors have been identified that could be responsible for introducing NZMS into non-infested waters (e.g., birds, wildlife, farm animals, and humans) the human-related vectors are the ones most easily controlled. Snails can attach to fishing and recreational equipment and clothing, and pets. Since the snails are not digested by trout, they can also be transferred to other waters in the stomachs of fish stocked by hatcheries. To date, NZMS have not been detected in any state trout hatchery, however, it was recently detected in a private trout hatchery in Mono County.

NZMS was first detected in California in 2000 in the Owens River (Mono County). The Department implemented an intensive campaign in the Owens River area to inform anglers and the general public about the need to clean equipment and prevent the spread of the snail to other waters. Unfortunately, NZMS was subsequently detected in October 2003 in Putah Creek (Solano County). Putah Creek was closed to fishing for 120 days (December 26, 2003 through April 23, 2004) while the Department and others investigated the extent of the infestation and developed a plan of action to reduce the spread the snail. Shortly after closing Putah Creek to fishing, NZMS was discovered in the Mokelumne and Calaveras rivers. Efforts to inform the public about methods to reduce the spread of the snail that were initiated in Inyo and Mono counties are now being expanded statewide.

Currently, there are no known reasonable controls or eradication methods to manage NZMS populations once they become established in a natural stream system. NZMS can be killed with various types of chemical applications, however, these methods are not practical because most other aquatic life within a stream or lake would also be killed. The best management practice known to date is to control the spread of NZMS.

(b) Authority and Reference Sections from Fish and Game Code for

Regulation:

Authority cited: Sections 2118 and 2120, Fish and Game Code.

Reference: Sections 1002, 2116, 2118, 2118.2, 2118.4, 2119-2155, 2190, 2271, 3005.2 and 3005.92, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change: None.

(d) Identification of Reports or Documents Supporting Regulation Change:
None.

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public hearings were held prior to the Notice meeting. The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change: None were identified.

(b) No Change Alternative: If the proposed change is not adopted the Department will not have the authority to prohibit the possession or transport of live invasive New Zealand Mudsnaills.

(c) Consideration of Alternatives: In view of information currently available, there is no reasonable alternative that would be more effective in carrying out the purposes for which the regulation change is intended.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businessmen to Compete with Businesses in Other States: The proposed action will not have a significant statewide adverse economic impact affecting businesses, including the ability of California businesses to compete with businesses in other states. The proposed change is expected to prevent potential declines in trout populations and their habitats.

- (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California: None.
- (c) Cost Impacts on a Representative Private Person or Business: None.
- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State: None.
- (e) Other Nondiscretionary Costs/Savings to Local Agencies: None.
- (f) Programs Mandated on Local Agencies or School Districts: None.
- (g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4: None.
- (h) Effect on Housing Costs: None.

Informative Digest/Policy Statement Overview

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